

IN THE CLAIMS:

1. (Original) A multi-media information playback device which plays back multi-media a disc information [recorded in a recording medium] comprising:

(a) a [disc] recording medium having pieces of page information, each of which is made up of multi-media information that describes contents of a plurality of screen images, [successively] stored in a storage area, the page information including:

(1) a partial image list having a pair of partial image information showing a partial image of a screen image and display state information showing display state of the partial image, and

(2) control information which describes a command to be executed according to an input signal, including a display state change command instructing to change the display state of the partial image;

(b) a page information read means for reading a piece of page information from the [disc] recording medium;

(c) a display data creation means for creating display data of the screen image by placing the partial image shown. by the partial image information on a screen;

(d) a display means for displaying each display data created by the display data creation means;

(e) an input means for receiving an input signal from an operator; and

(f) a command execution means for detecting the input signal inputted by the operator, judging whether the input signal corresponds to the command described by the control information the page information read by the page information read means, and instructing the display data creation means to create new display data by changing the display state of the

23 corresponding partial image according to the display state change command when the input
24 signal corresponds to the display state change command;

25 wherein the display data creation means creates new display data according to the
26 command execution means.

1 2. (Original) The multi-media information playback device of claim 1, wherein the
2 page information includes:

B¹ 3 (a) the partial image list;

4 (b) the control information including an animation display command
5 instructing to change and display the display state information of the partial image corresponding
6 to elapsed time; and

7 (c) time sequence control information including animation control
8 information which describes values of the display state information of the partial image
9 corresponding to the elapsed time;

10 wherein the command execution means includes:

11 (a) a first timer for measuring the elapsed time after start of activation;

12 and

13 (b) an animation display command execution unit for activating the
14 first timer when an input signal corresponding to the animation display command
15 is detected, calculating values of the display state information corresponding to
16 the elapsed time of each of the partial images based on the animation control
17 information at predetermined times, instructing the display data creation means to
18 create new display data by changing the display state of the partial image

19 according to the calculated values of the display state information, and stopping
20 the first timer when execution of the animation display command is completed;
21 wherein the display data creation means creates new display data according to the
22 animation display command execution unit.

61 1 3. (Original) The multi-media information playback device of claim 2, wherein the
2 page information includes:

3 (a) the partial image list having a pair of the partial image information and
4 display state information, the display state information including X-Y coordinates showing a
5 display position of the partial image to be displayed on the screen, X-Y enlargement rates
6 showing a ratio of size of the partial image shown by the partial image information and a partial
7 image to be displayed on the screen, and a rotational angle between the partial image shown by
8 the partial image information and a partial image to be displayed on the screen; and

9 (b) time sequence control information including the animation control
10 information which describes at least one among the values of the X-Y coordinates, the X-Y
11 enlargement rates, and the rotational angle corresponding to the elapsed time;

12 wherein the animation display command execution unit includes:

13 (a) an X-Y coordinates calculation unit for calculating the X-Y
14 coordinates corresponding to the elapsed time based on the animation control
15 information at predetermined times;

16 (b) an X-Y enlargement rate calculation unit for calculating the X-Y
17 enlargement rates corresponding to the elapsed time based on the animation
18 control information at predetermined times; and

19 (c) a rotational angle calculation unit for calculating the rotational
20 angle corresponding to the elapsed time based on the animation control
21 information at predetermined times.

1 4. (Original) The multi-media information playback device of Claim 3, wherein
2 there is at least one storage area on the [disc] recording medium for [successively] storing page
3 information and at least one storage area for [successively] storing time sequence information,
4 the page information including:

5 (a) the partial image list,

6 (b) the control information including a time sequence processing start
7 command instructing to start execution of time sequence processing corresponding to the elapsed
8 time, and

9 (c) time sequence control information including time sequence processing
10 control information having a name of time sequence information to be played back according to
11 the time sequence processing start command, IDs showing contents of the time sequence
12 information to be played back at predetermined times, and playback state information describing
13 how the time sequence information should be played back in accordance with display of the
14 partial image shown by the partial image information in the partial image list;

15 wherein the time sequence information has information, which should be played
16 back according to the elapsed time, stored in order of playback;

17 wherein the command execution means includes:

18 (a) a second clock unit for measuring the elapsed time after the start of
19 activation; and

(b) a time sequence processing execution unit for activating the second clock means when an input signal corresponding to the time sequence processing start command is detected, designating contents of the time sequence information corresponding to the elapsed time, and stopping the second clock unit when playback of the time sequence information is completed;

wherein the multi-media information playback device further includes:

(a) a page storage means, which is implemented by RAM, for storing the page information read by the page information read means;

(b) a time sequence information read means for reading the time sequence information designated by the time sequence processing execution unit from the [disk] recording medium; and

(c) a playback means for playing back the time sequence information read by the time sequence information read means, and instructing the display means to display the time sequence information.

5. (Original) The multi-media information playback device of claim 4, wherein the page information includes:

(a) the partial image list,

(b) the control information, and

(c) time sequence control information including time sequence processing control information having a name of first time sequence information as time sequence information to be played back according to the time sequence processing start command, IDs of sound information to be played back at predetermined times, and playback state information

9 which describes how sound information should be played back in accordance with display of the
10 partial image shown by the partial image information in the partial image list;

11 wherein the time sequence information includes the first time sequence
12 information comprising sound information corresponding to the ID of sound information, the
13 sound information being divided into equal predetermined sizes and placed in order of playback
14 corresponding to the elapsed time;

B 15 wherein the time sequence processing execution unit includes a first time
16 sequence processing execution unit for designating the sound information in the first time
17 sequence information corresponding to the elapsed time at predetermined times, when a name of
18 the first time sequence information is shown by the time sequence processing control
19 information;

20 wherein the playback means includes a sound playback unit for playing back the
21 sound information.

1 6. (Original) The multi-media information playback device of claim 4, wherein the
2 page information includes:

- 3 (a) the partial image list,
4 (b) the control information, and
5 (c) the time sequence control information including a name of a second time
6 sequence information as time sequence information to be played back according to the time
7 sequence processing start command, pairs of IDs of sound information and image information to
8 be played back at predetermined times, and the playback state information which describes at

9 least one of dynamic picture and animation should be displayed in an area relating to the partial
10 image shown by the partial image information;

11 wherein the time sequence information includes the second time sequence
12 information comprising sound information divided into equal predetermined sizes and image
13 information showing an image of at least one of the dynamic picture and the animation, the
14 sound information and the image information being placed in order of playback corresponding to
15 the elapsed time;

16 wherein the time sequence processing execution unit includes a second time
17 sequence processing execution unit for designating sound information and image information in
18 the second time sequence information corresponding to the elapsed time at predetermined times
19 when the second time sequence information is shown by the time sequence processing control
20 information, and instructing the display data creation means to create new display data by
21 placing the partial image read by the time sequence information read means in an area shown by
22 the playback state information;

23 wherein the display data creation means creates new display data according to the
24 second time sequence processing execution unit.

1 7. (Currently Amended) A multi-media information record device for recording
2 multi-media information in a [disc] recording medium, comprising:

3 (a) a partial image storage means for storing the partial image information of
4 at least one partial image in one partial image file, the partial image information being a part of
5 the screen image;

6 (b) a partial image list input means for receiving input of a name of at least
7 one partial image file in the partial image storage means and display state information showing
8 display state of the partial image shown by the partial image information in the partial image file;

9 (c) a page information storage means for having a plurality of separate small
10 storage areas, each of which is used for storing at least a piece of page information which is
11 made up of multi-media information that describes contents of a plurality of screen images;

B (12 (d) a partial image list write means for writing a pair of the partial image
13 information and the display state information in a first small storage area in the page information
14 storage means along with the Ids of the partial image information and the display state
15 information, after reading partial image information from the partial image file whose name is
16 inputted, the display state information being inputted according to the partial image information;

17 (e) a control information input means for receiving input of control
18 information which includes a name of input signal and display state change command instructing
19 to change display state of the partial image corresponding to the input signal;

20 (f) a control information write means for writing the inputted control
21 information in a second small storage area in the page information storage means; and

22 (g) a page information record means for [successively] recording information,
23 which is written as a piece of page information in each small storage area in the page information
24 storage means, in a storage area on the [disc] recording medium.

1 8. (Original) The multi-media information record device of claim 7, wherein the
2 control information includes animation display command instructing to change and display state
3 information of the partial image corresponding to the elapsed time;

4 wherein the control information input means further includes an animation display
5 command input unit for receiving input of a pair of an input signal and the animation display
6 command;

7 wherein the multi-media information record device further includes:

8 (a) a time sequence control information input means for receiving time
9 sequence control information including animation control information, the
10 animation control information describing how display state of the partial image
11 changes according to the elapsed time; and

12 (b) a time sequence control information write means for writing the
13 inputted time sequence control information in a third small storage area in the
14 page information storage means.

1 9. (Original) The multi-media information record device of claim 8, wherein the
2 partial image list input means further includes a display state information input unit for receiving
3 input of display state information for each piece of partial image information, the display
4 information including X-Y coordinates showing a display position of the partial image to be
5 displayed on the screen, X-Y enlargement rates showing a ratio of size of the partial image
6 shown by the partial image information and a partial image to be displayed on the screen, and a
7 rotational angle between the partial image shown by the partial image information and a partial
8 image to be displayed on the screen;

9 wherein the time sequence control information input means receives input of
10 animation control information which describes how at least one among the values of the X-Y

11 coordinates, the X-Y enlargement rates, and the rotational angle changes corresponding to the
12 elapsed time.

1 10. (Original) A multi-media information playback device for reading multi-media
2 information from a data server connected via a network and playing back the multi-media
3 information, comprising:

4 (a) a page information read means for reading a piece of page information,
5 which is made up of multi-media information that describes contents of a plurality of screen
6 images, stored as one file from a data server connected via a network, the page information
7 including:

8 (1) a partial image list having at least one pair of the partial image
9 information showing a partial image of a screen image and display state
10 information describing display state of the partial image, and

11 (2) control information which describes a command to be executed
12 according to an input signal, including a display state change command
13 instructing to change the display state of the partial image;

14 (b) a display data creation means for creating display data of the screen image
15 by placing the partial image shown by the partial image information on a screen;

16 (c) a display means for displaying each display data created by the display
17 data creation means;

18 (d) an input means for receiving an input signal from an operator; and

19 (e) a command execution means for detecting the input signal inputted by the
20 operator, judging whether the input signal corresponds to the command described by the control

21 information in the page information read by the page information read means, and instructing the
22 display data creation means to create new display data by changing the display state of the
23 corresponding partial image according to the display state change command when the input
24 signal corresponds to the display state change command;

25 wherein the display data creation means creates new display data according to the
26 command execution means.

β 1 11. (Original) The multi-media information playback device of claim 10, wherein the
2 page information including:

3 (a) the partial image list;

4 (b) the control information including the animation display instructing to
5 change and display state information of the partial image corresponding to the elapsed time; and

6 (c) time sequence control information including animation control
7 information which describes values of display state information of the partial image
8 corresponding to the elapsed time;

9 wherein the command execution means includes:

10 (a) a first timer for measuring the elapsed time after start of activation;

11 and

12 (b) an animation display command execution unit for activating the
13 first timer when an input signal corresponding to the animation display command
14 is detected, calculating values of the display state information corresponding to
15 the elapsed time of each of the partial images based on the animation control
16 information at predetermined times, instructing the display data creation means to

17 create new display data by changing the display state of the partial image
18 according to the calculated values of the display state information, and stopping
19 the first timer when execution of the animation display command is completed;
20 wherein the display data creation means creates new display data according to the
21 animation display command execution unit.

B^l 1 12. (Original) The multi-media information playback device of claim 11, wherein the
2 page information including:

3 (a) the partial image list having of at least one pair of the partial image
4 information and the display state information including X-Y coordinates showing a display
5 position of the partial image to be displayed on the screen, X-Y enlargement rates showing a
6 ratio of size of the partial image shown by the partial image information and the partial image to
7 be displayed on the screen, and a rotational angle between the partial image shown by the partial
8 image information and the partial image to be displayed on the screen;

9 (b) the control information including the animation display command; and

10 (c) time sequence control information including the animation control
11 information which describes at least one among the values of the X-Y coordinates, the X-Y
12 enlargement rates, and the rotational angle corresponding to the elapsed time;

13 wherein the animation display command execution unit includes:

14 (a) an X-Y coordinates calculation unit for calculating the X-Y
15 coordinates corresponding to the elapsed time based on the animation control
16 information at predetermined times;

17 (b) an X-Y enlargement rate calculation unit for calculating the X-Y
18 enlargement rates corresponding to the elapsed time based on the animation
19 control information at predetermined times; and

20 (c) a rotational angle calculation unit for calculating the rotational
21 angle corresponding to the elapsed time based on the animation control
22 information at predetermined times.

B¹
1 13. (Original) The multi-media information playback device of claim 12, wherein the
2 page information including:

3 (a) the partial image list;

4 (b) the control information including a time sequence processing start
5 command instructing to start execution of time sequence processing corresponding to the elapsed
6 time; and

7 (c) time sequence control information including time sequence processing
8 control information having a name of time sequence information to be played back according to
9 the time sequence processing start command, Ids showing contents of the time sequence
10 information to be played back at predetermined times, and playback state information describing
11 how the time sequence information should be played back in accordance with display of the
12 partial image shown by the partial image information in the partial image list;

13 wherein the command execution means includes:

14 (a) a second timer for measuring the elapsed time after the start of
15 activation; and

16 (b) a time sequence processing execution unit for activating the second
17 timer when an input signal corresponding to the time sequence processing start
18 command is detected, designating contents of the time sequence information
19 corresponding to the elapsed time, and stopping the second timer when playback
20 of the time sequence information is completed;

21 wherein the multi-media information playback device further includes:

22 (a) a page storage means, which is implemented by RAM, for storing
23 the page information read by the page information read means;

24 (b) a time sequence information read means for reading contents of the
25 time sequence information designated by the time sequence processing execution
26 unit from the time sequence information stored as one file in the data server via a
27 network, the time sequence information having contents in order of playback
28 corresponding to the elapsed time and its name being included in the time
29 sequence control information; and

30 (c) a playback means for playing back the time sequence information
31 ready by the time sequence information read means, and instructing the display
32 means to display the time sequence information.

1 14. (Original) The multi-media information playback device in claim 13, wherein the
2 page information including:

3 (a) the partial image list;

4 (b) the control information; and

5 (c) time sequence control information including time sequence processing
6 control information having a name of the first time sequence information as time sequence
7 information to be played back according to the time sequence processing start command, sound
8 information to be played back according to the elapsed time of the first time sequence
9 information, and

10 playback state information describing how the sound information should be
B¹ 11 played back in accordance with display of the partial image shown by partial image information
12 in the partial image list;

13 wherein the time sequence processing execution unit includes a first time
14 sequence processing execution unit for designating the sound information in the first time
15 sequence information corresponding to the elapsed time at predetermined times, when a name of
16 the first time sequence information is shown by the time sequence processing control
17 information;

18 wherein the time sequence information read means reads the sound information
19 designated by first time sequence processing execution unit from the first time sequence
20 information stored as one file in the data server, the first time sequence information describing
21 the divided sound information in order of playback corresponding to the elapsed time and its
22 name being included in the time sequence control information;

23 wherein the playback means includes a sound playback unit for playing back the
24 sound information.

1 15. (Original) The multi-media information playback device of claim 13, wherein the
2 page information including:

3 (a) the partial image list;

4 (b) the control information; and

5 (c) the time sequence control information including a name of the second time
6 sequence information as time sequence information to be played back according to the time
7 sequence processing start command, a pair of sound information and image information to be
8 played back corresponding to the elapsed time of the second time sequence information, and
9 playback state information which describes at least one of dynamic picture and animation should
10 be displayed in the area relating to the partial image shown by the partial image information;

11 wherein the time sequence /processing execution unit includes a second time
12 sequence processing execution unit for designating sound information and image information in
13 the second time sequence information corresponding to the elapsed time at predetermined times
14 when the second time sequence information is shown by the time sequence processing control
15 information, and instructing the display data creation means to create new display data by
16 placing the partial image read by the time sequence information read means in an area shown by
17 the playback state information;

18 wherein the time sequence information read means reads the sound information
19 and the screen image information designated by the second time sequence processing execution
20 unit from the second time sequence information stored as one file in the data server, the time
21 sequence information describing the divided sound information in order of playback and the
22 screen image information describing one screen image of at least one of motion picture and

23 animation corresponding to the elapsed time and its name being included in the time sequence
24 control information;

25 wherein the display data creation means creates new display data according to the
26 second time sequence processing execution unit.

1 16. (Original) A multi-media information record device for recording multi-media
2 information in a data server connected via a network, comprising:

3 (a) a partial image storage means for storing the partial image information of
4 at least one partial image in one partial image file, the partial image information being a part of
5 the screen image;

6 (b) a partial image list input means for receiving input of a name of at least
7 one partial image file in the partial image storage means and display state information showing
8 display state of the partial image shown by the partial image information in the partial image file;

9 (c) a page information storage means for having a plurality of separate small
10 storage areas, each of which is used for storing at least a piece of page information which is
11 made up of multi-media information that describes contents of a plurality of screen images;

12 (d) a partial image list write means for writing a pair of the partial image
13 information and the display state information in a first small storage area in the page information
14 storage means along with the Ids of the partial image information and the display state
15 information, after reading partial image information from the partial image file whose name is
16 inputted, the display state information being inputted according to the partial image information;

17 (e) a control information input means for receiving [^]input of control
18 information which includes a name of input signal and display state change command instructing
19 to change display state of the partial image corresponding to the input signal;

20 (f) a control information write means for writing the inputted control
21 information in a second small storage area in the page information storage means; and

22 (g) a page information record means for recording contents of a piece of page
23 information in one file in the data server after transmitting contents written as a piece of page
24 information in each storage area in the page information storage means to a data server along
25 with its write request.

1 17. (Original) The multi-media information record device of claim 16, wherein the
2 control information includes animation display command instructing to change and display state
3 information of the partial image corresponding to the elapsed time;

4 wherein the control information input means further includes an animation display
5 command input unit for receiving input of a pair of an input signal and the animation display
6 command;

7 wherein the multi-media information record device further includes:

8 (a) a time sequence control information input means for receiving time
9 sequence control information including animation control information, the
10 animation control information describing how display state of the partial image
11 changes according to the elapsed time; and

12 (b) a time sequence control information write means for writing the
13 inputted time sequence control information in a third small storage area in the
14 page information storage means.

1 18. (Original) The multi-media information record device of claim 17, wherein the
2 partial image list input means further includes a display state information input unit for receiving
3 input of display state information for each piece of partial image information, the display
4 information including X-Y coordinates showing a display position of the partial image to be
5 displayed on the screen, X-Y enlargement rates showing a ratio of size of the partial image
6 shown by the partial image information and a partial image to be displayed on the screen, and a
7 rotational angle between the partial image shown by the partial image information and a partial
8 image to be displayed on the screen;

9 wherein the time sequence control information input means receives input of
10 animation control information which describes how at least one among the values of the X-Y
11 coordinates, the X-Y enlargement rates, and the rotational angle changes corresponding to the
12 elapsed time.

1 19. (Original) A multi-media information record device for recording multi-media
2 information in a disc, comprising:

3 (a) a partial image storage means for storing the partial image information of
4 at least one partial image in one partial image file, the partial image information being a part of
5 the screen image;

6 (b) a partial image list input means for receiving input of a name of at least
7 one partial image file in the partial image storage means and display state information showing
8 display state of the partial image shown by the partial image information in the partial image file;

9 wherein the partial image list input means further includes a display state
10 information input unit for receiving input of display state information for each piece of partial
11 image information, the display information including X-Y coordinates showing a display
12 position of the partial image to be displayed on the screen, X-Y enlargement rates showing a
13 ratio of size of the partial image shown by the partial image information and a partial image to be
14 displayed on the screen, and a rotational angle between the partial image shown by the partial
15 image information and a partial image to be displayed on the screen;

16 (c) a page information storage means for having a plurality of separate small
17 storage areas, each of which is used for storing at least a piece of page information;

18 (d) a partial image list write means for writing a pair of the partial image
19 information and the display state information in a first small storage area in the page information
20 storage means along with the Ids of the partial image information and the display state
21 information, after reading partial image information from the partial image file whose name is
22 inputted, the display state information being inputted according to the partial image information;

23 (e) a control information input means for receiving input of control
24 information which includes a name of input signal and display state change command instructing
25 to change display state of the partial image corresponding to the input signal;

26 wherein the control information includes animation display command instructing
27 to change and display state information of the partial image corresponding to the elapsed time;

28 wherein the control information input means further includes an animation display
29 command input unit for receiving input of a pair of an input signal and the animation display
30 command;

31 (f) a control information write means for writing the inputted control
32 information in a second small storage area in the page information storage means;

33 (g) a page information record means for [successively] recording information,
34 which is written as a piece of page information in each small storage area in the page information
35 storage means, in a storage area on the disc;

36 (h) a time sequence control information input means for receiving time
37 sequence control information including animation control information, the animation control
38 information describing how display state of the partial image changes according to the elapsed
39 time;

40 wherein the time sequence control information input means receives input of
41 animation control information which describes how at least one among the values of the X-Y
42 coordinates, the X-Y enlargement rates, and the rotational angle changes corresponding to the
43 elapsed time;

44 (i) a time sequence control information write means for writing the inputted
45 time sequence control information in a third small storage area in the page information storage
46 means;

47 (j) a time sequence information storage means having a piece of time
48 sequence information stored in each time sequence information file, the time sequence
49 information having information written in order of playback corresponding to the elapsed time;
50 and

51 (k) a time sequence information record means for [successively] recording time
52 sequence information in a storage area on the disc after receiving input of a name of at least one
53 time sequence information file in the time sequence information storage means, reading time
54 sequence information from the time sequence information file whose name is inputted, and
55 correlating the time sequence information with a name of time sequence information
56 corresponding to the name of the file;

57 wherein the control information input means further includes a time sequence
58 processing start command input unit for receiving input of a pair of an input signal and a time
59 sequence processing start command in the control information, the time sequence processing
60 start command instructing to start execution of time sequence processing corresponding to the
61 elapsed time and being included in the control information;

62 wherein the time sequence control information input means further includes a
63 time sequence processing control information input unit for receiving input of the time sequence
64 processing control information which includes a name of time sequence information to be played
65 back according to the time sequence processing start command, the showing contents of the time
66 sequence information to be played back at predetermined times, and playback state information
67 which describes how the time sequence information should be played back in accordance with
68 display of the partial image list, the time sequence processing control information being included
69 in the time sequence control information.

1 20. (Original) The multi-media information record device of claim 19, wherein the
2 time sequence information includes first time sequence information in which sound information

3 is divided into predetermined equal data sizes, the sound information being written along with its
4 ID in order of playback corresponding to the elapsed time;

5 wherein the time sequence information record means includes a first time
6 sequence information record unit for recording first time sequence information in the disc after
7 reading the first time sequence information from the time sequence information file, whose name
8 is inputted, when a name of the first time sequence information is inputted; and

9 wherein the time sequence processing control information input unit includes first
10 time sequence processing control information input unit for receiving input of first time sequence
11 processing control information which includes a name of first time sequence information to be
12 played back according to time sequence processing start command of the page information, Ids
13 of sound information to be played back at predetermined times, and playback state information
14 which describes how the sound information should be played back in accordance with display of
15 the partial image shown by the partial image information in the partial image list, the first time
16 sequence control information being included in the time sequence processing control
17 information.

1 21. (Original) The multi-media information record device of claim 19, wherein the
2 time sequence information record means includes a second time sequence information record
3 unit for recording second time sequence information in the disc after reading the second time
4 sequence information from the time sequence information file, whose name is inputted, when a
5 name of the second time sequence information is inputted, the second time sequence information
6 having sound information divided into predetermined equal data sizes, image information
7 showing one screen image of at least one of animation and dynamic picture and Ids of the sound

8 information and the image information written in order of playback corresponding to the elapsed
9 time; and

10 wherein the time sequence processing control information input unit includes a
11 second time sequence processing control information input unit for receiving input of second
12 time sequence processing control information which includes a name of second time sequence
13 information to be played back according to time sequence processing start command of the page
14 information, pairs of Ids of sound information and image information to be played back at
15 predetermined times, and the playback state information describing at least one of dynamic
16 picture and animation should be displayed in an area relating to partial image shown by the
17 partial image information in the partial image list.

1 22. (Original) A multi-media information record device for recording multi-media
2 information in a data server connected via a network, comprising:

3 (a) a partial image storage means for storing the partial image information of
4 at least one partial image in one partial image file, the partial image information being a part of
5 the screen image;

6 (b) a partial image list input means for receiving input of a name of at least
7 one partial image file in the partial image storage means and display state information showing
8 display state of the partial image shown by the partial image information in the partial image file;

9 (c) a page information storage means for having a plurality of separate small
10 storage areas, each of which is used for storing at least a piece of page information which is
11 made up of multi-media information that describes contents of a plurality of screen images;

12 (d) a partial image list write means for writing a pair of the partial image
13 information and the display state information in a first small storage area in the page information
14 storage means along with the Ids of the partial image information and the display state
15 information, after reading partial image information from the partial image file whose name is
16 inputted, the display state information being inputted according to the partial image information;

17 wherein the partial image list input means further includes a display state
18 information input unit for receiving input of display state information for each piece of partial
19 image information, the display information including X-Y coordinates showing a display
20 position of the partial image to be displayed on the screen, X-Y enlargement rates showing a
21 ratio of size of the partial image shown by the partial image information and a partial image to be
22 displayed on the screen, and a rotational angle between the partial image shown by the partial
23 image information and a partial image to be displayed on the screen;

24 (e) a control information input means for receiving input of control
25 information which includes a name of input signal and display state change command instructing
26 to change display state of the partial image corresponding to the input signal;

27 wherein the control information includes animation display command instructing
28 to change and display state information of the partial image corresponding to the elapsed time;

29 wherein the control information input means further includes an animation display
30 command input unit for receiving input of a pair of an input signal and the animation display
31 command;

32 (f) a control information write means for writing the inputted control
33 information in a second small storage area in the page information storage means;

34 (g) a page information record means for recording contents of a piece of page
35 information in one file in the data server after transmitting contents written as a piece of page
36 information in each storage area in the page information storage means to a data server along
37 with its write request;

38 (h) a time sequence control information input means for receiving time
39 sequence control information including animation control information, the animation control
40 information describing how display state of the partial image changes according to the elapsed
41 time;

42 wherein the time sequence control information input means receives input of
43 animation control information which describes how at least one among the values of the X-Y
44 coordinates, the X-Y enlargement rates, and the rotational angle changes corresponding to the
45 elapsed time;

46 (i) a time sequence control information write means for writing the inputted
47 time sequence control information in a third small storage area in the page information storage
48 means;

49 (j) a time sequence information storage means having a piece of time
50 sequence information stored in each time sequence information file, the time sequence
51 information having information written in order of playback corresponding to the elapsed time;
52 and

53 (k) a time sequence information record means for recording contents of time
54 sequence information in one file in the data server for each piece of time sequence information,
55 after receiving a name of at least one time sequence information file in the time sequence
56 information storage means, reading time sequence information from the time sequence

57 information file whose name is inputted, correlating the time sequence information with a name
58 of time sequence information corresponding to the file, and transmitting the time sequence
59 information to the data server along with its write request;

60 wherein the control information input means further includes a time sequence
61 processing start command input unit for receiving input of a pair of an input signal and a time
62 sequence processing start command in the control information, the time sequence processing
63 start command instructing to start execution of time sequence processing corresponding to the
64 elapsed time and being included in the control information; wherein the time sequence control
65 information input means further includes a time sequence processing control information input
66 unit for receiving input of the time sequence processing control information which includes a
67 name of time sequence information to be played back according to the time sequence processing
68 start command, IDs showing contents of the time sequence information to be played back at
69 predetermined times, and playback state information which describes how the time sequence
70 information should be played back in accordance with display of the partial image shown by the
71 partial image information in the partial image list, the time sequence processing control
72 information being included in the time sequence control information.

1 23. (Original) The multi-media information record device of claim 22, wherein the
2 time sequence information includes first time sequence information in which sound information
3 is divided into predetermined equal data sizes, the sound information being written along with its
4 ID in order of playback corresponding to the elapsed time; wherein the time sequence
5 information record means includes a first time sequence information record unit for recording
6 first time sequence information in the disc after reading the first time sequence information from

7 the time sequence information file, whose name is inputted, when a name of the first time
8 sequence information is inputted; wherein the time sequence processing control information
9 input unit includes first time sequence processing control information input unit for receiving
10 input of first time sequence processing control information which includes a name of first time
11 sequence information to be played back according to time sequence processing start command of
12 the page information, IDs of sound information to be played back at predetermined times, and
13 playback state information which describes how the sound information should be played back in
14 accordance with display of the partial image shown by the partial image information in the
15 partial image list, the first time sequence control information being included in the time sequence
16 processing control information.

1 24. (Original) The multi-media information record device of claim 22, wherein the
2 time sequence information record means includes a second time sequence information record
3 unit for recording second time sequence information in the disc after reading the second time
4 sequence information from the time sequence information file, whose name is inputted, when a
5 name of the second time sequence information is inputted, the second time sequence information
6 having sound information divided into predetermined equal data sizes, image information
7 showing one screen image of at least one of animation and dynamic picture and IDs of the sound
8 information and the image information written in order of playback corresponding to the elapsed
9 time;

10 wherein the time sequence processing control information input unit includes a
11 second time sequence processing control information input unit for receiving input of second
12 time sequence processing control information which includes a name of second time sequence
v

13 information to be played back according to time sequence processing start command of the page
14 information, pairs of Ins of sound information and image information to be played back at
15 predetermined times, and the playback state information describing at least one of dynamic
16 picture and animation should be displayed in an area relating to partial image shown by the
17 partial image information in the partial image list.

1 25. (Original) A multi-media information playback device which plays back multi-
2 media information recorded in a recording medium comprising:

b' 3 (a) a disc having pieces of page information [successively] stored in a storage
4 area, each piece of page information being made up of multi-media information that describes
5 contents of a plurality of screen images, the page information including:

6 (1) a partial image list having a pair of partial image information
7 showing a partial image of a screen image and display state information showing
8 display state of the partial image,

9 (2) control information which describes a command to be executed
10 according to an input signal, the control information including:

11 a display state change command instructing to change the display
12 state of the partial image;

13 an animation display command instructing to change and display
14 the display state information of the partial image corresponding to elapsed
15 time; and

16 a time sequence processing start command instructing to start
17 execution of time sequence processing corresponding to the elapsed time;

(3) time sequence control information having information, which should be played back according to the elapsed time, stored in order of playback, the time sequence control information including:

(a) animation control information which describes values of the display state information of the partial image corresponding to the elapsed time; and

(b) time sequence processing control information having a name of time sequence information to be played back according to the time sequence processing start command, IDs showing contents of the time sequence information to be played back at predetermined times, and playback state information describing how the time sequence information should be played back in accordance with display of the partial image shown by the partial image information in the partial image list;

(b) a page information read means for reading a piece of page information from the disc;

(c) a display data creation means for creating display data of the screen image by placing the partial image shown by the partial image information on a screen;

(d) a display means for displaying each display data created by the display data creation means;

(e) an input means for receiving an input signal from an operator; and

(f) a command execution means for detecting the input signal inputted by the operator, judging whether the input signal corresponds to the command described by the control

information in the page information read by the page information read means, and instructing the display data creation means to create new display data by changing the display state of the corresponding partial image according to the display state change command when the input signal corresponds to the display state change command; the command execution means including:

(1) a first timer for measuring the elapsed time after start of activation;

(2) an animation display command execution unit for activating the first timer when an input signal corresponding to the animation display command is detected, calculating values of the display state information corresponding to the elapsed time of each of the partial images based on the animation control information at predetermined times, instructing the display data creation means to create new display data by changing the display state of the partial image according to the calculated values of the display state information, and stopping the first timer when execution of the animation display command is completed;

(3) a second timer for measuring the elapsed time after the start of activation; and

(4) a time sequence processing execution unit for activating the second timer when an input signal corresponding to the time sequence processing start command is detected, designating contents of the time sequence information corresponding to the elapsed time, and stopping the second timer when playback of the time sequence information is completed;

wherein the display data creation means creates new display data according to the animation display command execution unit;

64 (g) a page storage means, which is implemented by RAM, for storing the page
65 information read by the page information read means;

66 (h) a time sequence information read means for reading the time sequence
67 information designated by the time sequence processing execution unit from the disk; and

68 (i) a playback means for playing back the time sequence information read by
69 the time sequence information read means, and instructing the display means to display the time
70 sequence information.

1 26. (Original) A multi-media information playback device which plays back multi-
2 media information recorded in a recording medium comprising:

3 (a) a disc having pieces of page information [successively] stored as one file
4 from a data server connected via a network, each piece of page information being made up of
5 multi-media information that describes contents of a plurality of screen images, the page
6 information including:

7 (1) a partial image list having a pair of partial image information
8 showing a partial image of a screen image and display state information showing
9 display state of the partial image,

10 (2) control information which describes a command to be executed
11 according to an input signal, the control information including:

12 a display state change command instructing to change the display
13 state of the partial image;

14 an animation display command instructing to change and display
15 the display state information of the partial image corresponding to elapsed
16 time; and

17 a time sequence processing start command instructing to start
18 execution of time sequence processing corresponding to the elapsed time;

19 (3) time sequence control information having information, which
20 should be played back according to the elapsed time, stored in order of playback,
21 the time sequence control information including:

22 (a) animation control information which describes values of
23 the display state information of the partial image corresponding to the
24 elapsed time; and

25 (b) time sequence processing control information having a
26 name of time sequence information to be played back according to the
27 time sequence processing start command, IDs showing contents of the
28 time sequence information to be played back at predetermined times, and
29 playback state information describing how the time sequence information
30 should be played back in accordance with display of the partial image
31 shown by the partial image information in the partial image list;

32 (b) a page information read means for reading a piece of page information
33 from the disc;

34 (c) a display data creation means for creating display data of the screen image
35 by placing the partial image shown by the partial image information on a screen;

(d) a display means for displaying each display data created by the display data creation means;

(e) an input means for receiving an input signal from an operator; and

(f) a command execution means for detecting the input signal inputted by the operator, judging whether the input signal corresponds to the command described by the control information in the page information read by the page information read means, and instructing the display data creation means to create new display data by changing the display state of the corresponding partial image according to the display state change command when the input signal corresponds to the display state change command; the command execution means including:

(1) a first timer for measuring the elapsed time after start of activation;

(2) an animation display command execution unit for activating the first timer when an input signal corresponding to the animation display command is detected, calculating values of the display state information corresponding to the elapsed time of each of the partial images based on the animation control information at predetermined times, instructing the display data creation means to create new display data by changing the display state of the partial image according to the calculated values of the display state information, and stopping the first timer when execution of the animation display command is completed;

(3) a second timer for measuring the elapsed time after the start of activation; and

(4) a time sequence processing execution unit for activating the second timer when an input signal corresponding to the time sequence processing start

59 command is detected, designating contents of the time sequence information
60 corresponding to the elapsed time, and stopping the second timer when playback
61 of the time sequence information is completed;

62 wherein the display data creation means creates new display data according to the
63 animation display command execution unit;

64 (g) a page storage means, which is implemented by RAM, for storing the page
65 information read by the page information read means;

66 (h) a time sequence information read means for reading the time sequence
67 information designated by the time sequence processing execution unit from the time sequence
68 information stored as one file in the data server via a network, the time sequence information
69 having contents in order of playback corresponding to the elapsed time and its name being
70 included in the time sequence control information; and

71 (i) a playback means for playing back the time sequence information read by
72 the time sequence information read means, and instructing the display means to display the time
73 sequence information.
